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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,602	03/28/2001	Shinji Uchiyama	2355.12110	1884

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NEW YORK, NY 10112

EXAMINER
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LAU, TUNG S

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/818,602

Applicant(s)

UCHIYAMA ET AL.

Examiner

Tung S Lau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-12, 15, 17-20 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-12, 15, 17-20 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 25, 2, 3, 6, 7, 8, 9, 10, 11, 12, 15, 17, 18, 19, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Andrei state (Superior augmented reality tracking July 1996, page 429-438).

Regarding claims 1, 25:

Andrei state discloses a position and orientation determination apparatus and method which identifies a parameter indicating a position and orientation of a capture unit adapted to capture a picture in a real space containing a plurality of feature points whose positions are known in a three-dimensional array, comprising: a position and orientation measurement unit adapted to measure the position and orientation of the capture unit in a method other than using a captured picture (page 429, abstract, section 1, 2); a detection unit adapted to detect the plurality of feature points and their positions in a two-dimensional array on an image pickup screen using the picture in the real space captured by the capture unit (page 429, abstract, section 1, 2); a prediction unit adapted to predict the positions of the feature points in the two-dimensional array on the

image pickup screen based on the position and orientation of the capture unit measured by said position and orientation measurement unit (page 430-431, section 5.1); a correction unit adapted to correct a parameter of the measured position and orientation of the capture unit based on an average value or an average weighting value of the positions of the feature points on the image pickup screen of the capture unit obtained by said prediction unit, and based on an average value or an average weighting value of the positions of the feature points obtained by said detection unit (page 435, section 8); and an image generation unit adapted to generate an image of a virtual object based on the corrected parameter, and to superimpose the image of the virtual object on the picture in the real space captured by the capture unit (page 429, section 1, 2, fig. 10).

Regarding claims 2, 3, 6, 7, 8, 9, 10, 11, 12, 15, 17, 18, 19, 20:

Andrei state discloses a three-dimensional position are known (page 432, section 6.2.1), image are detected from image pickup from unit (page 432, section 6.2.1), position measuring unit is a sensor (page 433, section 7.1), use magnetic sensor (page 430, section 3), correction unit is translates (page 432, section 7.1), translates transform (page 432-433, section 7.2), rotation and translation transform (page 433, section 7.1), works in two dimensional position of the correction and translation (page 432-433, section 7.2), re-predicts position after

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correction (page 432-433, section 7.1-7.2), plurality of times calculation (page 435, section 8), using calculation of the angle (page 433, section 7.1), to reduce predetermined error (page 435, section 8).

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 703-305-3309. The examiner can normally be reached on M-F 9-5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TC2800 RightFAX Telephone Numbers : TC2800 Official Before-Final RightFAX - (703) 872-9318, TC2800 Official After-Final RightFAX - (703) 872-9319

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